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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,421	10/24/2005	Philippe Meyer	15675P564	7558

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EXAMINER

LIN, KUANG Y

ART UNIT PAPER NUMBER

1725

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/519,421	<b>Applicant(s)</b> MEYER ET AL.	
	<b>Examiner</b> Kuang Y. Lin	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/20/04 & 10/24/05.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. Applicant is requested to provide in the specification headings, such as "BACKGROUND OF THE INVENTION", "SUMMARY OF THE INVENTION", "BRIEF DESCRIPTION OF THE DRAWINGS", "DETAILED DESCRIPTION OF THE DRAWINGS", etc. to render the specification in a better format.
2. The specification is objected to under 35 USC 112, 1<sup>st</sup> paragraph in that in page 7, line 20, the word "rod" is misspelled. In page 8, line 23, it recites the "arrows Fc". However, it is not clear what is referred to. Line 30, it recites "shoulder B". What material is used for making the same? In page 9, lines 7-12, the language is written in a non-idiomatic manner such that render the meaning vague and indefinite. Applicant is required to correct these and other errors which might occur throughout the specification.
3. Claims 7-11 and 18-23 are objected to in that they involve an improper multiple dependent claim format. A multiple dependent claim can not depend from a multiple dependent claim.
4. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed language of "such as" (claim 1, lines 2 and 8 and claim 12, lines 2 and 9) is deemed to be indefinite since it is not sure what scope is claimed. In claim 1, lines 5-9 and claim 12, lines 6-10, they are written in a non-idiomatic manner such that render the meaning vague and indefinite. Further, claim 1, line 11, the meaning of "lined with its liquid alloy core" is not clear. In claims 4 and

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15, it recites "shoulder". It is not clear what material is used to make the same.

In claim 12, line 5, what "metal shell" is referred? Line 13, what is "risering"? In

claim 17, there is a lack of antecedent in the claim for "**the** cooling units". In

claim 23, what "mold shell" is referred to?

5. Claims 7-11 and 18-23 are rejected under 35 USC 112, 4<sup>th</sup> paragraph as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 7-11 and 20-23 (process claims) involve structure limitation, rather than process step, in a method claim while claims 18 and 19 (apparatus claims)

involve process step, rather than structural limitation, in an apparatus claim.

Thus, they do not further limitation the scope of the claim from which they depend.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-23 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over Shade.

Shade substantially shows the invention as claimed except that he does not disclose to feeding the mold by gravity. However, in col. 11, first few lines of Shade he states that the opening for molten metal may be located at parting line SL (see figure 4). The location is similar to the instant application (see figure 5). Thus, it is apparent that Shade also feeds the mold by gravity. With respect to claims 2 and 3, US 2003/0000677 to Goya Arcelus et al. show that feature to be conventional. With respect to claim 4, Shade also provide core 22 (shoulder). With respect to claims 5, 7, 8, etc., the specific arrangement of the segments and the sequence of assembling the core and cooling unit depends on the designated casting structure to be obtained. It would have been obvious for those of ordinary skill in the casting to properly arrange the segments such that to obtain the designated final cast product. With respect to claim 10 and 12, the cover core 24 of Shade is the area of riser or a "risering".

9. The patents to Legge et al. and Buchborn are cited to further show the state of the art.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179.

The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kuang Y. Lin  
Primary Examiner  
Art Unit 1725

8-2-06